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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,807

02/08/2005

Yoshinobu Honkura

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12/06/2006

C. IRVIN MCCLELLAND

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ALEXANDRIA, VA 22314

EXAMINER

PATIDAR, JAY M

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

B/

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,807	<b>Applicant(s)</b> HONKURA ET AL.	
	<b>Examiner</b> Jay M. Patidar	<b>Art Unit</b> 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9-11,15,16 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-8,12-14 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. This communication is in response to applicant's amendment received on September 26, 2006.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,9,10-11,15-16,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al. (6,472,868) in view of Pitt.

As to claim 1, Takayama discloses a magnetic field sensing device including a magnetic impedance element comprising a magnetic sensitive member 1 having a characteristic changed responsive to an external magnetic field; an insulator 2,3 formed to allowed penetration of the magnetic sensitive member therethrough and an electromagnetic coil 4/5 made up of foil-like conductive patterns arranged in adjacent relation on an outer surface of the insulator (e.g. figs. 11-13). Takayama does not explicitly disclose three sensors for detecting orthogonal magnetic field components. Pitt is cited to show this feature. Pitt teaches to use three magnetic sensitive elements mounted in three

different directions to measure three-dimensional components of the magnetic field (figs. 3,4,8,24E). It is also well known in the magnetic field art to use three orthogonal sensing elements to detect three dimensional magnetic field components. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify of Takayama for three dimensional magnetic field sensor as shown by Pitt to measure magnetic field components in three orthogonal directions.

As to claim 9, Takayama discloses an amorphous wire serving as the magnetic sensitive member (col. 2, line 57).

As to claims 10-11,15, the combination of Takayama and Pitt fails to show the shape and mounting of the third sensor. However, Pitt teaches a substrate 8 and three sensors on three walls (fig. 3,8). The location of the third sensor on the side wall orthogonal to the surface of the IC or the location of the IC is considered an obvious matter of design selection, since applicant has not disclosed that this structure solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well as long as all three sensors are orthogonal to each other. Applicant also admits this by showing in figs. 14A-14D,22.

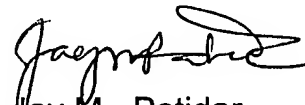
As to claims 16,18, Tamayama in combination with Pitt show the magnetic field sensing device as explained above including electrodes being orthogonal to the sensing member (fig. 11 in Takayama).

3. Claims 2-8,12-14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Applicant's arguments with respect to rejected claims have been considered but are moot in view of the new ground(s) of rejection.
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note PTO. 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 571-272-2265. The examiner can normally be reached on M-Thur 7:00-5:30.

The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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December 1, 2006